REMARKS

Reconsideration and allowance of the subject application are respectfully requested. By this Amendment, Applicant has canceled claims 3 and 4 and added new claims 8-10. Thus, claims 1, 2 and 5-10 are now pending in the application. In response to the Office Action (Paper No. 4), Applicant respectfully submits that the pending claims define patentable subject matter.

I. Preliminary Matters

The drawings are objected to because the Examiner maintains that the reference sign "161" is not shown in the drawings. However, Applicant respectfully submits that the reference sign "161" (corresponding to the three-phase stator winding portions) is shown in Figure 4. Accordingly, the Examiner is requested to remove the objection to the drawings.

The specification and claims are objected to because the Examiner maintains that the spacing of the lines is such as to make reading and entry of amendments difficult. However, Applicant respectfully submits that the line spacing of the specification and claims complies with 37 C.F.R. § 1.52(b)(2)(i) since the lines of the specification and the claims are one and one-half spaced as required by 37 C.F.R. § 1.52(b)(2)(i). Accordingly, the Examiner is requested to remove the objection to the specification and claims.

The title of the invention is objected to because the Examiner maintains the title is not descriptive of the invention to which the claims are directed. By this Amendment, Applicant has changed the title to "Neutral-Point Joint Portion of Stator Winding for an Alternator". Accordingly, the Examiner is requested to remove the objection to the title.

II. Prior Art Rejections

A. Disclosure of Umeda et al.

Umeda et al. (hereinafter "Umeda") discloses a stator of a vehicle AC generator includes a stator core having a plurality of slots and a plurality of phase-windings formed of a plurality of conductor members inserted in said plurality of slots. The stator winding has first and second coil-end groups formed of portions of the conductor members respectively extending from the slots to opposite ends of the stator core. Each of the phase-windings has a lead-end which partially covered with an insulation member and extends along the first coil-end group to be connected to one another. The insulation member is bonded to the first coil-end group.

As shown in Figures 8-10, lead-ends X1 and Z1 of a first coil-end group 31a are extended along the ridge line of the first coil-end group 31a to be connected to a lead-end Y1, which extends in the axial direction, to form a neutral point 33k. The lead-end X1 is partly covered by flexible textile insulation tube 333. The lead-ends X1 and Z1 have a rectangular cross-section and are disposed on the ridge with their longer side down. The insulation tube 333 is bonded to the first coil-end group 31a by an adhesive made of a epoxy resin. The other lead-ends X2, Y2 and Z2 extend from the first coil-end group 31a and are connected to the respective input terminals of a rectifier 5.

As shown in Figures 13-14, a plurality of portions of the lead-ends X1 and Z1 are covered with an insulation adhesive 336 made of a heat-resistant material such as epoxy resin or silicone resin in order to bond the lead-ends X1 and Z1 to the ridge of first coil-end group 31a.

As shown in Figures 15 and 16, the lead-ends X1 and Z1 have bent portions B1 as well as common neutral point 33k. The lead-ends X1 and Z1 respectively extend along the ridge of first coil-end group 31a and are bonded to the ridge at a plurality of portions thereof at bonded portions 338, which are formed from liquid resin 337. In other words, the bonded portions 338 are formed in gaps between the lead-ends X1 and Z1 and edges of turn portions 331c of the first coil-end group 31a.

B. Analysis

Claims 1-3, 6 and 7 are rejected under 35 U.S.C. § 102(b) as being anticipated by Umeda. Claims 4 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Umeda. Applicant respectfully submits that the claimed invention would not have been anticipated by or rendered obvious in view of Umeda.

By this Amendment, Applicant has amended independent claim 1 to incorporate the subject matter of dependent claim 4. In particular, amended claim 1 now recites, in part, "a connecting member including a conductor having flat side surface portions, said flat side surface portions of said neutral-point terminals and said connecting member being abutted and electrically joined to each other to form a neutral-point joint portion of said stator winding".

As the Examiner correctly notes in the Office Action, Umeda does not teach or suggest the claimed connecting member (previously recited in dependent claim 4). Nonetheless, the Examiner maintains that it would have been obvious to modify the stator of Umeda to include a connecting member "since the applicant has not disclosed that the connecting member solves any

stated problem or is for any particular purpose". However, the specification (page 17) clearly states numerous benefits to utilizing a connecting member including (1) maintaining a uniform length of the neutral point terminals to simplify the joining operation and reduce damage to the winding during joining, (2) providing a weld portion which is compact and a neutral point joint portion which is highly reliable, (3) a shortened length of the neutral-point terminals which provides resistance to vibration, improved reliability, reduced interference between the neutral-point joint portion and the circuit boards, and (4) allowing selection to the shape, dimensions and material of connecting to provide increased strength of the neutral-point joint portion.

Accordingly, independent claim 1, as well as dependent claims 2, 3, 6 and 7, should be allowable because the applied reference does not teach or suggest all of the features of the claims.

III. New Claims

By this Amendment, Applicant has added new dependent claim 8 and 9 to further define the claimed invention with regards to the fourth and fifth embodiments of the present invention shown in Figures 7 and 8. Applicant respectfully submits that it is quite clear that Umeda does not teach or suggest the claimed structure of the connecting member and/or the claimed connection between the connecting member and the neutral point terminals, as recited in dependent claims 8 and 9.

Further, Applicant has added new independent claim 10 which is directed to the third embodiment of the present invention shown in Figure 6. Applicant respectfully submits that it is

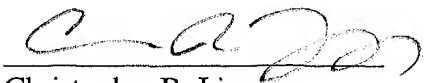
quite clear the Umeda does not teach or suggest a neutral-point joint portion wherein the neutral-point terminals are stacked in axial direction, as recited in claim 10. Rather, Umeda discloses that a neutral-point joint portion wherein the neutral-point terminals are stacked in the circumferential direction. Further, the third embodiment provides improved workability over the neutral-point joint portion structure disclosed by Umeda since a clamping jig in which the abutted portions are clamped is no longer necessary due the neutral-point terminals being stacked in the axial direction at the abutted portions (see pages 14-15).

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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